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Project Report
Categorical Exclusion
Group II

Illinois Route 2
S. Beltline Road to Cedar Street
Rockford, Illinois

FA Route 742
Section 40
Winnebago County
P-92-136-94
Contract #'s 64515, 64820 and 64821

In general, the proposed improvement consists of the widening and resurfacing of South Main Street from South Beltline Road to Cedar Street in Rockford, Illinois. Right and left turn lanes will be added as required at intersections throughout the project limits. The proposed improvement also includes the realignment of Clifton Avenue and the realignment of the mainline between Cole Avenue and Lincoln Avenue.

Prepared by:

RJN Group, Inc., Consulting Engineers

for

Illinois Department of Transportation
Division of Highways
Region Two/District 2

December, 2005

Illinois Department of Transportation

Phase I Report Approval

Key Route: Illinois Route 2 PPS No.:
F.A. Route: FA Route 742 Marked Route: Illinois Route 2 County: Winnebago County
Section: 40 Project Length: 5.97 km
Job Number: P-92-136-94 Contract No.: 64515,64820, & 64821 Program No.: 2-10160-0100 –
Beltline Rd to 0.4 mi. N. of Harrison Ave., 2-15070.0100 – At Clifton Ave, 2-10160.0200 – S. of Pond St. to Cedar St.
Location: Beltline Road to Cedar Road, Rockford, Illinois
General Description of Existing Facility: Major Principal Arterial Route
Need for Proposed Improvement: Widening and Resurfacing required; capacity improvements at intersections

Design Policies Used: ☐ New Construction ☐ Reconstruction ☒ 3R ☐ Other

General Description of Proposed Improvement: Widening and Resurfacing; right turn lanes and left turn lanes as required Realignment of Clifton Ave. at IL 2 and realignment of IL 2 between Marchesano and Lincoln are proposed.

Approximate Amount of ROW to be Purchased:
125 Parcels Totaling 17.3 Acres.

Number of Businesses: 11 and Residences: 30 to be acquired.

Estimated Program Cost: 17,481,000 (in FY 2005 Dollars) Fund Type: STP – Roadway – HBRRP - Structure
Construction Cost: $15 M ROW Cost: $2.5 M
Utility Relocation Cost: $600,000 Consultant P.E. Cost: $

Is cooperation/participation by local agency in accordance with Department policy? Yes ☒ No ☐

Coordination Meetings: Are minutes from district coordination meetings attached? Yes ☒ No ☐

Design Exceptions:
- Level One Required? Yes ☐ No ☒
- Level Two Required? Yes ☒ No ☐
- If yes, note date approved: June 1, 2005

Type of Public Involvement Activity:
- Public Hearing Offered? Yes ☒ No ☐
- Informational Meeting Held? Yes ☒ No ☐
- Property Owners Contacted? Yes ☒ No ☐

☐ Categorical Exclusion Certification Statement (Group I):
"This project is of a type which qualifies as a Categorical Exclusion Action. It has been determined not to involve any Potential for Unusual Circumstances. Therefore, it is eligible to be processed as a Group I Categorical Exclusion."

☒ Categorical Exclusion Certification Statement (Group II):
"It has been determined this project will involve one or more of the factors indicating a Potential for Unusual Circumstances. Group II Categorical Exclusion concurrence for this project was obtained from the FHWA on November 30, 2005 Documentation of the concurrence is attached."

District Design Approval — IDOT Regional Engineer — 12/23/05 Date

BDE 2601 (Rev. 02/05)
DF-824-013

pl-0003

FACT SHEET
STRUCTURE REPLACEMENT AND ROADWAY IMPROVEMENT

TYPE OF IMPROVEMENT: Structure Replacement and Roadway Improvement
PROJECT FUNDING: STP
HIGHWAY CLASSIFICATION: Major Principal Urban/Rural Arterial

TRAFFIC VOLUMES: 2000 ADT: 16,600 7% Trucks 2020 Structural Traffic
2020 ADT: 22,450 2020 DHV: 2370 PV 19,275
SU 830
MU 620

SURROUNDING LAND USE: RESIDENTIAL/COMMERCIAL/INDUSTRIAL

CLEAR ZONE WIDTH: 8.0 m (28 ft.) & Var. from pavement edge or 450 mm (1.5 ft.) from face of curb

	Existing	Proposed
RIGHT-OF-WAY WIDTH:	20.1m – 45.0m (66 – 150 feet)	20.1m – 45.0m (66 – 150 feet)
ROADWAY WIDTH:*	13.4m – 22.0m (44 – 72 feet)	13.4m – 25.0m (44 – 82 feet)
NUMBER OF LANES/WIDTH:*	4 lanes/3.3m – 3.6m (11 – 12 ft.)	5 lanes/3.0m – 4.0m & Varies (10 – 14 ft.)
PAVEMENT WIDTH:*	13.4m – 15.8m (44 – 52 feet)	13.4m – 18.9m (44 – 62 feet)
SHOULDER WIDTH/TYPE:*	3.0m bituminous Beltline to U.S. Route 20	1.8m – 3.0m bituminous Beltline to Clifton
CURB WIDTH/TYPE:*	B-15.60 (B-6.24), B-15.30 (B-6.12) U.S. Route 20 to Cedar	B-15.60, B-15.30 U.S. Route 20 to Cedar
PARKING LANES/WIDTH:*	1.8m (6 ft.) (both sides) 15th Avenue to Morgan only	Eliminate on-street parking

*See Typical Sections - Figure 5

PAVEMENT SURFACE CONDITION: CRS Values
5.3 (Cedar to Michigan)
5.0 (Michigan to South of Clifton)
5.1 (South of Clifton to Beltline Road)

ARE THERE ANY BRIDGES IN THIS SECTION? Yes

CAN THEY REMAIN IN PLACE? Yes

GIVE DESCRIPTION OF WHAT MUST BE DONE TO ANY BRIDGE IN THIS SEGMENT AND WHEN WORK WILL BE ACCOMPLISHED: Illinois Route 2 structure over Fuller's Creek will be removed and replaced (see TS&L, Figure 7). The Illinois Route 2 structure over Kent Creek is historic, and will remain in place (see BCR, Figure 7). The concrete facing on the abutments and piers will be repaired and sealed.

NAME OF STREAM OR CROSSING: Fuller Creek

RATINGS:		
	Sufficiency	66.0
	Superstructure	5
	Substructure	5
	Overall	5

DATE OF RATING: 5/20/05

	Existing	Proposed
STRUCTURE NUMBER:	101-0023	101-0173
TYPE OF STRUCTURE:	Single-Span Closed Abutment	Single-Span Open Abutment
NUMBER OF LANES:	4 @ 3.6m (12")	4 @ 3.6 (12') and Varies
NUMBER OF SPANS/CELLS:	1 Span	1 Span
STRUCTURE LENGTH:	11.7 m (38.5')	24.0 m (78.74')
STRUCTURE WIDTH:	20.4 m (67.0')	24.1 m Out to Out (South) 25.2 m Out to Out (North)
STRUCTURE CLEAR WIDTH:	15.8 m (52.0')	21.6 m (70.87')
SIDEWALKS:	n/a	n/a

HYDRAULIC INFORMATION:

A.	DRAINAGE AREA:	12.43 km sq
B.	EXISTING OPENING:	16.39 m sq
C.	REQUIRED OPENING:	19.52 m sq
D.	PROPOSED OPENING:	19.52 m sq
E.	Q (50):	

IS WATERWAY OPENING ADEQUATE? Yes.

CHANNEL WORK REQUIRED: No.

HAS BRIDGE OFFICE CONCURRED IN BRIDGE CONDITION REPORT?
Yes (See Bridge Condition Report, Figure 7).

HAS DISTRICT BRIDGE ENGINEER MADE A RECENT FIELD INSPECTION OF STRUCTURE?
Yes (Date) _____ No; ABUTMENTS AND PIERS? Yes. No.

COMMENTS ON FIELD CHECK: (See Bridge Condition Report, Figure 7)

NAME OF STREAM OR CROSSING: Kent Creek

RATINGS:		
	Sufficiency	72.8
	Superstructure	n/a
	Substructure	n/a
	Overall	n/a

DATE OF RATING: 11/30/05

Note: The Kent Creek structure is maintained by the City of Rockford.

	Existing	Proposed
STRUCTURE NUMBER:	101-6110	No Change
TYPE OF STRUCTURE:	Arch-Deck, Filled Spandrel	No Change
NUMBER OF LANES:	4 @ 3.6m (12")	No Change
NUMBER OF SPANS/CELLS:	2-Spans	No Change
STRUCTURE LENGTH:	18.9 m (62.0')	No Change
STRUCTURE WIDTH:	15.2 m (50.0')	No Change
STRUCTURE CLEAR WIDTH:	15.0 m (49.3)	No Change
SIDEWALKS:	2.0 m (6.8') Rt and Lt	No Change

HYDRAULIC INFORMATION:

A.	DRAINAGE AREA:	n/a
B.	EXISTING OPENING:	n/a
C.	REQUIRED OPENING:	n/a
D.	PROPOSED OPENING:	n/a
E.	Q (50):	n/a

IS WATERWAY OPENING ADEQUATE? Yes.

CHANNEL WORK REQUIRED: No.

HAS BRIDGE OFFICE CONCURRED IN BRIDGE CONDITION REPORT?
Yes (See Bridge Condition Report, Figure 7).

HAS DISTRICT BRIDGE ENGINEER MADE A RECENT FIELD INSPECTION OF STRUCTURE?
Yes (Date) _____ No; ABUTMENTS AND PIERS? Yes. No.

COMMENTS ON FIELD CHECK: (See Bridge Condition Report, See Figure 7)

WHAT HAS A FIELD CHECK INDICATED ON CULVERT EXTENSIONS, SIDE ROAD CULVERT IMPROVEMENTS AND OTHER SAFETY WORK?

The culverts will be sized and investigated further during the development of the contract plans.

WHAT HAS A REVIEW OF ACCIDENT DATA SHOWN?

See Accident Analysis – Figure 6

REHABILITATION DESIGN SPEED:

- 50 km/h (30 mph) Cedar to Marchesano Drive/15th Avenue
- 60 km/h (40 mph) Marchesano Drive/15th Avenue to Clifton
- 70 km/h (45 mph) Clifton to north of US 20
- 70 km/h (45 mph) South of US 20 to Beltline Rd.

ARE EXISTING ALIGNMENTS ADEQUATE? HORIZONTAL: No
VERTICAL: No

IF "NO", DISCUSS WHAT WILL BE DONE AT DEFICIENT LOCATIONS:

Horizontal: Curve 2-6 – Radius increase from 133m to 200m; Curve 2-7 relocated and radius increased from 150m to 700m

Vertical: In the reconstructed areas south of U.S. 20 and between Sta. 11+290 to Sta. 12+040 a minimum pavement grade will be 0.3%. In the areas north of U.S. 20 to Sta. 11+290 and from Sta. 12+040 to Sta. 12+350 resurfacing will be completed using slope correction which will influence roadway profiles. From Sta. 12+350 the existing pavement profile and cross slopes will be maintained due to the adjacent urbanization.

TRAFFIC DETOUR METHOD: The method of handling traffic was investigated and it was determined the Stage Construction was the most cost effective (See Traffic Maintenance Analysis text – Figure 8)

ADDITIONAL COMMENTS: n/a

RAILROAD DATA:

Trains/Day N/A # Tracks: 1 Speeds: N/A

Proposed Crossing Improvement: Sta. 13+131.95 Chicago and Northwestern over Illinois Route 2

Crossing Protection:

Existing:	Grade Separation	E. A. F.	0
Proposed:	N/A	E. A. F.	N/A

Trains/Day 5 # Tracks: 1 Speeds: 20 mph

Proposed Crossing Improvement: Sta. 12+728.14 Union Pacific

Crossing Protection:

Existing:	Flashing Lights and Gates	E. A. F.	0.01
Proposed:	N/A	E. A. F.	N/A

Trains/Day 4 # Tracks: 2 Speeds: 10 mph

Proposed Crossing Improvement: Sta. 13+076.85 Burlington Northern Santa Fe

Crossing Protection:

Existing:	Flashing Lights	E. A. F.	0.022
Proposed:	Flashing Lights and Gates	E. A. F.	0.008

SIDEWALKS: Existing: 1.2m (4 feet) Proposed: 1.5m (5 feet)

SIDEWALK ACCOMMODATIONS:

Sidewalks are proposed on the east and west side of Illinois Route 2 from Clifton Avenue to Cedar Street, along the east side of Illinois Route 2 from Sta. 8+700 to Clifton Avenue a 3m multi-use path is proposed.

BICYCLE ACCOMMODATIONS:

Bicycles will be accommodated on a proposed bike path along the west bank of the Rock River north of 15th Ave. Path is to be constructed by others.

TRUCK ROUTE DESIGNATION: Illinois Route 2 is designated as a Class II Truck Route from Beltline Road to U.S. Route 20.

SIGNALS TO BE INSTALLED OR MODERNIZED? Yes. See IDS Sheets – (See Figure 2b).

POLICY USED:

BDE Functional Classification General Requirements and applicable AASHTO

DESIGN EXCEPTIONS:

See Bi-Monthly Meeting Minutes, See Figure 10a

General Description of Existing Facility

Illinois Route 2, also known as South Main Street, is a major principal arterial that serves as a primary link between the Rockford Airport, the U.S. Route 20 Bypass and Downtown Rockford. The project is located in Winnebago County and begins at Beltline Road and extends north to Cedar Street. There are currently six signalized intersections within the project limits. The total project length is approximately 5.97 kilometers (4.3 mi.) and does not include the U.S. Route 20 interchange.

The existing cross-section of Illinois Route 2 varies from rural to the south to urban to the north and consists of four through lanes, two lanes in each direction. Illinois Route 2 is a Class II truck route from Beltline Road to the U.S. 20 Bypass. The speed limit from Beltline Road to the U.S. Route 20 Bypass (project omission section) is 80 km/h (50 mph), 70 km/h (45 mph) from Harrison Avenue to south of Clifton Avenue, 60 km/h (40 mph) south of Clifton Avenue to Marchesano Drive/15th Avenue and 50 Km/h (30 mph) from Marchesano Drive/15th Avenue to Cedar Street.

The existing roadway can be divided into five separate segments. The southernmost segment of Illinois Route 2 begins at the south project limit at Beltline Road and continues north to just south of the U.S. Route 20 interchange. The right-of-way width for this segment is 45 meters (150 ft.). The existing cross-section consists of four 3.6m (12 ft.) through lanes, two in each direction, separated by a 1.2m (4 ft.) painted median, and 3.0m (10 ft.) bituminous paved outside shoulders. This section has an open ditch drainage system. The land use within this section is primarily residential and institutional.

Continuing north of the U.S. Route 20 interchange, the second segment of Illinois Route 2 is from Sauk Lane to Clifton Avenue. The right-of-way for this segment varies from 20.1m (66 ft.) to 39.0m (128 ft.). The existing cross-section consists of four 3.6m (12 ft.) lanes, two in each direction, separated by a 1.2m (4 ft.) painted median, and B-15.60 (B-6.24) curb and gutter. The land use within this section is residential, commercial, and light industrial.

The third segment of Illinois Route 2 is from Clifton Avenue to Marchesano Drive/15th Avenue. The existing right-of-way varies from 20.1m (66 ft.) to 30.0m (100 ft.). The existing cross-section consists of four 3.6m (12 ft.) lanes, two in each direction, separated by a 1.2m (4 ft.) painted median, and B-15.60 (B-6.24) curb and gutter. There is an existing 1.37m (4.5 ft.) concrete sidewalk on the west side of Illinois Route 2 in this section that begins just north of Clifton Avenue at Station 10+575 and extends to 15th Avenue. The land use within this section is commercial, institutional, and residential.

The fourth segment of Illinois Route 2 is from 15th Avenue to Morgan Street. The right-of-way for this section is 20.1m (66 ft.). The existing pavement width is 15.8m (52 ft.) edge-to-edge with B-15.60 (B-6.24) curb and gutter and 1.2m (4 ft.) concrete sidewalks on both sides. The roadway cross-section consists of four 3.0m (10 ft.) lanes, two in each direction, and parking on both sides. The land use within this section is commercial and residential.

The northernmost segment of Illinois Route 2 extends from Morgan Street to the north project terminus at Cedar Street. The right-of-way for this section is 20.1m (66 ft.). The existing cross-section consists of four 3.3m (11 ft.) lanes, two in each direction, B-15.60 (B-6.24) curb and gutter and concrete sidewalks on both sides. The land use within this section is commercial and industrial.

There are nine horizontal curves in the Illinois Route 2 alignment within the project limits. From the south end of the project, the first five curves are superelevated and are located near the following side roads: Beltline Road, Harrison Avenue, Prairie Road, Clifton Avenue, and Cole Avenue.

The intent of this project is to improve the pavement condition of Illinois Route 2 through rehabilitation, improve intersection safety and capacities and consolidate access where feasible. Anticipated future commercial/industrial development in the project study area will generate increased traffic volumes and will require improvements and upgrades to Illinois Route 2 along the project corridor.

Mainline Illinois Route 2

The projected 2000 and 2020 traffic volumes for Illinois Route 2 are 16,600 and 22,450 vehicles per day, respectively.

There were a total of 442 accidents with 219 injuries and three fatalities along this 5.97 kilometer (4.3 mile) section of Illinois Route 2 during the period from 1997 to 1999. The three predominant types of accidents were turning (15%), rear end (34%), and angle (23%). These accident types comprised 72% of the total accidents during the study period. Based on a review of accident plots, the distribution of accidents appeared random along Illinois Route 2 south of Marchesano Drive/15th Avenue and increased at the intersections. North of Marchesano Drive/15th Avenue, the accident rate along mainline Illinois Route 2 was somewhat higher.

A review of the horizontal and vertical geometrics was performed. Three of nine horizontal curves had substandard radii for a 50 Km/h (30 mph) design speed (see curves 2-7, 2-8, 2-9). Curves 2-2 and 2-3 are superelevated at 2.15 percent and 2.5 percent, respectively. These rates are below the AASHTO standard for low-speed urban streets, Method 5. The K-values of the vertical curves were checked for stopping sight-distance and were found to meet metric highway design criteria. However, some of the existing grades were below the 0.3% minimum standard. Also, sight distance criteria are not currently met at Illinois Route 2 and Prairie Road.

Intersections

Within the limits of this project, existing intersections were analyzed for vehicle capacity, accident patterns, and geometric deficiencies. Existing conditions at ten specific intersection locations are discussed in the following section, including Illinois Route 2 at Pelley Road, Harrison Avenue, Prairie Road, Clifton Avenue, Ogilby Road, 15th Avenue, Lincoln/Graham Street, Montague Road, Morgan Street, and Cedar Street.

- Pelley Road - This four-legged intersection is currently unsignalized and unchannelized. Existing geometrics are substandard, and traffic signals are warranted at this location.

- Harrison Avenue - This intersection is signalized with single left and right turn channelization on all four legs. The projected 2022 DHVs for the southbound and westbound left-turn movements are 595 and 460 respectively. Based on these projected turning movement volumes dual left-turn lanes are needed to provide an acceptable volume to capacity ratio for each of these movements.

- Prairie Road - Prairie Road intersects Illinois Route 2 from the west to form a T-intersection. The intersection is unsignalized with a stop sign on Prairie Road. The projected 2020 northbound left-turn DHV onto Prairie Road is 190 vehicles. This volume requires an exclusive left-turn lane on Illinois Route 2 to allow vehicles to leave the through lane. Case III sight distance criteria are not currently met at this intersection.

- Clifton Avenue - This intersection is a skewed, unsignalized, three-legged intersection. Clifton Avenue intersects Illinois Route 2 from the west at a 35-degree angle and is stop sign controlled. The Klehm Arboretum is located at the southwest corner and is classified as Section 4(f) property. Because of the acute intersection angle at this location, consideration should be given to realigning the intersection. The intersection meets traffic signal warrant #1 and therefore should be signalized.

- Ogilby Road - Ogilby Road intersects Illinois Route 2 from the west at a 60-degree angle. The west leg of Ogilby Road is stop sign controlled at Illinois Route 2. Left turn channelization does not currently exist along Illinois Route 2 at this intersection and the corner radii need improvement.

- Marchesano Drive/15th Avenue - This intersection is signalized with left-turn channelization on Illinois Route 2 and exclusive right-turn lanes on the south and east legs. The east leg of this intersection is located on a structure that crosses the Rock River. The corner radii should be improved to accommodate a WB-18 metric (WB-60 English) design vehicle. Other geometric and signal timing modifications may be considered to ensure that this intersection operates at an acceptable level-of-service with projected 2022 traffic volumes.

- Lincoln Avenue/Graham Street/Heath Street - Graham Street intersects Illinois Route 2 from the east approximately 15m (45 ft.) north of Lincoln Avenue. Lincoln Avenue intersects Illinois Route 2 from the west. Both side streets are stop sign controlled. Heath Street is located just north of Graham Street, approximately 50m (164 ft.) and intersects Illinois Route 2 from the west. Although this intersection is not a high accident location, improvements should be considered to address the existing offset condition.
- Montague Street – At this intersection left-turn channelization exists along Montague Street but not on Illinois Route 2. Projected 2022 traffic volumes include 140 left turns onto Montague Street from each direction on Illinois Route 2 during peak hour conditions. Providing exclusive left turn lanes on Illinois Route 2 with a protected phase would improve the capacity and safety of the intersection.

- Morgan Street - The projected 2022 design hourly volumes for the northbound and southbound left-turn movements are 280 and 150 vehicles, respectively. In 1994, this intersection was rated as a high accident location. It had a total of 18 accidents with the predominant types being turning and rear-ends. In order to reduce the likelihood of these accident types of occurring and improve capacity, left-turn channelization is recommended along Illinois Route 2. However, there are buildings located on the existing 20.1m (66 ft.) right-of-way line on both sides. Both legs of Morgan Street are currently channelized at the Illinois Route 2 intersection.

- Cedar Street - Illinois Route 2 becomes one-way northbound at Cedar Street. The east leg of this intersection dead-ends at the Rock River. The intersection is signalized and operates at an acceptable level-of-service with projected 2020 DHVs. However, the northeast corner is offset into the intersection from the southeast corner, requiring northbound traffic in the outside lane to shift in the middle of the intersection.

Structures

Illinois Route 2 over Fullers Creek (SN: 101-0023) and Illinois Route 2 over Kent Creek (SN: 101-6110) are the only two structures located within the project limits:

- The structure carrying Illinois Route 2 over Fullers Creek consists of one span of reinforced concrete tee girders that was built in 1953. The concrete in the deck is in marginal condition as indicated by chloride test and core results.

- The Illinois Route 2 over Kent Creek structure is historic. The existing structure is 15m (49.3 ft.) face to face. It consists of 2 spans of stone arches with corrugated steel liners and was originally built in 1900. In 1961, the steel liners were replaced with galvanized corrugated metal. Besides some concrete surface deterioration on the pier and abutments, the structure is in good condition.

Description of Proposed Improvement

The proposed improvement of Illinois Route 2 consists primarily of widening, resurfacing, intersection improvements and consolidation of access. The section south of U.S. Route 20 and the realignment section between Marchesano Drive and Lane Street will be reconstructed. The remaining section of Illinois Route 2 will be resurfaced throughout the length of the project. Superelevation rates are based on a maximum of 4% for urban conditions (see BDE Manual, Figure 48-5A). Typical cross-sections will vary as follows:

- Beltline Road to the U.S. Route 20 interchange: Three through lanes in each direction with barrier median; design speed of 70 km/h (45 mph);
- North of U.S. Route 20 interchange to Morgan Street: Two through lanes in each direction - Barrier median (design speed 70 km/h – 45 mph) from Harrison Avenue to Clifton Avenue, painted and barrier median from Clifton Avenue to Morgan Street (design speed 60 km/h – 40 mph to Marchesano Drive/15th Avenue; 50 km/h – 30 mph from Marchesano Drive/15th Avenue to Morgan Street);
- Morgan Street to Cedar Street: Maintain existing four-lane cross-section; design speed of 50 km/h – 30 mph.

Ten existing intersections will be improved within the project limits. Traffic signals are proposed at the church entrance north of Pelley Road. In addition, future signals are proposed at the future Iroquois Connector and Harrison Connector intersections located along Illinois Route 2 between U.S. Route 20 and Harrison Avenue. These new intersections will provide for consolidation of access for future development of the area.

A frontage road plan was studied as part of this project. Because a development plan for the area has not been finalized, plans for future frontage roads were discarded in favor of planned consolidation of future access points along Illinois Route 2 within the project study limits.

Mainline Illinois Route 2

The study of the Illinois Route 2 corridor divides into five segments, based on the different existing and proposed conditions within each section. Based on proposed typical cross sections, the proposed improvements to mainline Illinois Route 2 within each section are described as follows:

- Beltline Road to U.S. Route 20 - The southern-most segment of Illinois Route 2 to be improved starts at Beltline Road and ends at the south ramp terminals of the U.S. Route 20 interchange, at approximately Station 7+513. South of U.S. Route 20, traffic volumes along Illinois Route 2 require three through lanes in each direction. The U.S. Route 20 interchange was designated by the District as an omission for this study. The proposed cross-section consists of six 3.6m (12 ft.) through lanes, three in each direction, separated by a 9.5m barrier median. Type B-15.60 curb and gutter is proposed along both sides of Illinois Route 2 through this segment. The Illinois Route 2 and Beltline Road intersection was improved in 1996 to provide access into a future development on the east leg. The posted speed limit in this section will be reduced from 80 km/h (50 mph) to 70 km/h (45 mph). The pavement in this section will be reconstructed.

- Sauk Lane to Clifton Avenue - The next segment to the north begins north of the existing U.S. Route 20 interchange, just north of Sauk Lane and ends at Clifton Avenue (Station 10+500). The study of this section of the Illinois Route 2 corridor included accommodating extensive developments that were under consideration. Alternatives considered included a frontage road system that would provide sufficient traffic capacity and appropriate access for the contemplated developments. The development plans failed to materialize, and the frontage road system study was no longer appropriate; plans for a future frontage road system along this section of Illinois Route 20 were therefore ultimately discarded. Illinois Route 2 was recently improved from the north ramp terminals at the U.S. Route 20 interchange north to approximately Station 8+700, north of Sauk Lane.

  The Gateway Corridor section of the study area, from US Route 20 to Harrison Avenue, included plans for connector roadways at Iroquois and Harrison. Although these routes are still indicated in the preferred alternate as future connector route intersections, they will not be constructed as part of this improvement unless developments requiring additional traffic capacity and access are constructed.

  The proposed cross-section for this segment includes a total of four 3.6m (12 ft.) through lanes, two in each direction. Type B-15.60 curb and gutter will be provided along both sides of Illinois Route 2 through this segment. Between Sauk Lane and Harrison Avenue a 4.2m (14 ft.) painted median is proposed. Potential traffic signals at two future intersections are accommodated through the proposed geometry for this segment (Harrison Connector, Iroquois Connector). Intersection Design Studies have been prepared for both of these potential future intersections as part of this study. Between Harrison Avenue and Clifton Avenue a 7.0m barrier median is proposed. A 3.0m (10 ft.) multi-use path will be constructed on the east side of Illinois Route 2 from Southrock Drive to Clifton Avenue. The City of Rockford will be responsible for the cost of installing the multi-use path including the purchase of additional right-of-way. The Department will only pay for half of the cost associated with installing a 5 ft. sidewalk.

- Clifton Avenue to Marchesano Drive/15th Avenue - The proposed cross-section for this segment consists of four 3.6m (12 ft.) through lanes, two in each direction, separated by a 4.0m barrier median, with Type B-15.60 (B-6.24) curb and gutter along both outside edges of pavement on Illinois Route 2. The total width of this proposed cross-section is 20.1m (66 ft.) from back to back of curb. 1.5m (5 ft.) sidewalks will be provided along the east and west side of Illinois Route 2. Access to Pond Street, Parkview Terrace, Blackhawk Avenue and Cole Avenue will be restricted to right-in/out only.

- Marchesano Drive/15th Avenue to Morgan Street – This segment of Illinois Route 2 begins just north of 15th Avenue and ends just north of Morgan Street. This segment transitions to a more traditional urban design, with limited right of way. The proposed typical cross-section consists of four 3.6m (12 ft.) through lanes, two in each direction, separated by a 3.6m (12 ft.) median with a type B-15.30 (B-6.12) curb and gutter and a 1.5m (5 ft.) wide sidewalk on both sides. Barrier median will be provided between 15th Avenue and Island Avenue and a painted median from Lincoln Avenue to Morgan Street. Access to Michigan Avenue, Indiana Avenue and Island Avenue will be restricted to right-in/out only. The sidewalks will be placed to provide for a 4.6m parkway (15 ft.) between the back of curb and the sidewalk on both sides from 15th Street to Island Avenue and a 3.0m (10 ft.) parkway on the east side from Lane Street to Loomis Street. The City will pay additional costs associated with the installation of a textured-colored sidewalk from Illinois Avenue to Morgan Street on both sides of Illinois Route 2.

It was determined that because of severe existing cross slopes on the Illinois Route 2 pavement in this section the pavement would be reconstructed. To increase the radius on mainline curves just north of Marchesano Drive/15th Avenue and just north of Lane Street, this portion of Illinois Route 2 will be realigned to the east. This realignment will displace a total of eight residences and five businesses along the east side of Illinois Route 2.

With the addition of a fifth lane, on-street parking will be eliminated in this segment. Off-street parking sites have been identified adjacent to Illinois Route 2 in close proximity to existing businesses. The proposed off-street parking sites are located at: The southeast corner of Illinois Route 2 and Knowlton Street, the southeast corner of Illinois Route 2 and Montague Street, the southeast and southwest corners of Illinois Route 2 and Loomis Street, and the southeast corner of Illinois Route 2 and Morgan Street.

- Morgan Street to Cedar Street - The northern-most section of Illinois Route 2 to be rehabilitated begins just north of Morgan Street and ends at Cedar Street. The proposed scope of work for this section involves maintaining the existing roadway cross-section and right-of-way width of 20.1m (66 ft.). The cross-section will consist of four 3.3m (11 ft.) lanes, two lanes in each direction, B-15.60 (B-6.24) curb and gutter and 1.5m (5 ft.) sidewalks on both sides. A 1.05m (3.5 ft.) raceway will be provided between the back-of-curb and edge-of-sidewalk on both sides. The sidewalk on both sides will be removed and replaced in this section.

- Existing superelevation rates will be maintained for all curves except curves 2-2 and 2-3. Curve 2-2 is located near Harrison Avenue and Curve 2-3 is near Prairie Road. The superelevation rates for both curves will be increased from 2.15 percent and 2.5 percent to 2.92 percent and 2.96 respectively in order to meet AASHTO standards for low-speed urban streets, Method 5 (See bi-monthly meeting minutes, December 4, 1996). The horizontal alignment for curves 2-6, and 2-7 will be improved with increased radii that will satisfy a 50 Km/h (30 mph) design speed.

  Bicycles will be accommodated on an alternate bike path planned within the Rock River corridor east of Illinois Route 2 (see Bi-Monthly meeting minutes, 10/16/96).

Intersections

- Pelley Road - The proposed scope of work at this intersection includes widening Illinois Route 2 to provide exclusive left and right turn lanes northbound and southbound. The proposed left and right-turn lanes will alleviate traffic in the through lanes, allowing vehicles to leave the highway and access the local roadway system and Faith Center. Pelley Road will be widened on both legs to provide for 1 - 3.6m (12 ft.) lane in each direction. Proposed left-turn lanes along each leg of Pelley Road at Illinois Route 2 will be 3.6m (12 ft.) wide with a 600mm (2 ft.) painted median. The east leg of Pelley Road will have B-15.60 (B-6.24) curb and gutter and the west leg will have 1.2m (4 ft.) paved bituminous outside shoulders. Traffic signals are anticipated at this intersection.

- Church entrance – Dual left turn lanes are proposed along Illinois Route 2 as part of proposed improvements to the church entrance, to help accommodate potential future traffic increases as development takes place at the site. A southbound right turn lane is also proposed, and a future northbound right turn lane could be accommodated with the proposed geometry. A potential future commercial entrance to the east opposite the church entrance would be also accommodated by this preliminary geometry. A total width of 16.2 meters is proposed along the church entrance. This will accommodate a potential eastbound left turn lane-through lane-right turn lane configuration, with each lane at 3.6 meters (12 feet) in width. The through lane would likely be striped out pending future construction of the east leg of the intersection. A 1.8 meter raised median is also proposed along this leg of the intersection. Traffic signals are anticipated at this intersection. The design was developed to physically accommodate and to provide access and traffic capacity for additional proposed facilities at the site.

- Future Iroquois connector – A future access road for development in the area would intersect with Illinois Route 2 at Station 8+915. The proposed mainline geometry for Illinois Route 2 includes sufficient width to provide a single left turn lane in each direction at this intersection. Right turn lanes in each direction along Illinois Route 2 would also be accommodated. It is anticipated that when constructed this intersection would be signalized.

- Future Harrison connector – A future access road for development in the area would intersect with Illinois Route 2 at approximately Station 9+235. The proposed mainline geometry for Illinois Route 2 includes sufficient width to provide a single left turn lane in each direction at this intersection. Right turn lanes in each direction along Illinois Route 2 would also be accommodated. It is anticipated that when constructed this intersection would be signalized.

- Harrison Avenue - Illinois Route 2 will be widened primarily to the west at this intersection to improve the existing horizontal alignment. The widening will provide for opposing dual-left turn lanes on Illinois Route 2. Harrison Avenue will be widened on both sides to provide two through lanes and a barrier median. The west leg will accommodate an exclusive left and right turn lanes eastbound. The east leg will accommodate an exclusive left turn lane, a combined through/left turn lane, a through lane and a right turn lane westbound. Existing traffic signals will be modernized at this intersection.

- Prairie Road – Because of sight distance constraints this intersection will be eliminated. The existing Prairie Road intersection will be removed from the Illinois Route 2 west edge of pavement west to the next intersection.

- Clifton Avenue - Clifton Avenue will be realigned to the north to intersect with Illinois Route 2 at approximately a 75-degree angle. The realignment of Clifton Avenue will provide a new east leg to the intersection, which will improve access to the area along the east side of Illinois Route 2. Left-turn channelization is proposed on all four legs, with an exclusive westbound left-turn lane on the west leg of Clifton Avenue into the Klehm Arboretum. Traffic signals are anticipated at this intersection.

- Pond Street/Parkview Terrace – Access to Pond Street and Parkview Terrace will be restricted to right-in/out only. Corner radii will be improved to both the east and west legs of this intersection. Traffic signals are not warranted at this intersection.

- Blackhawk Avenue – Access to Blackhawk Avenue will be restricted to right-in/out only. Corner radii will be improved at this T-intersection. Traffic signals are not warranted at this intersection.

- Ogilby Road – A northbound left-turn lane is proposed along Illinois Route 2 in conjunction with corner radii improvements at this T- intersection. Traffic signals are not warranted at this intersection.

- Marchesano Drive/15th Avenue - The scope of work at this intersection includes corner radii and signal timing improvements. A southbound right turn lane will be provided along the north leg of Illinois Route 2, and access in the northwest quadrant will be consolidated. Existing traffic signals at this location will be modernized.

- Lincoln Avenue/Graham Street - Left-turn channelization is proposed on Illinois Route 2 at Lincoln Avenue and Graham Street. All corners at this intersection will be improved to accommodate a WB-20 (WB-65) design vehicle except the southeast corner of Illinois Route 2 and Graham Street. This corner will be maintained to avoid purchasing a large building. Traffic signals are not warranted at this intersection.

- Wall Street - A northbound left-turn lane is proposed along Illinois Route 2 in conjunction with corner radii improvements at this T-intersection. Traffic signals are not warranted at this intersection.

- Lane Street - A southbound left-turn lane is proposed along Illinois Route 2 in conjunction with corner radii improvements at this T-intersection. In particular, the curb return in the southeast quadrant was designed to accommodate a WB-20 (WB-65) design vehicle. Traffic signals are not warranted at this intersection.

- Knowlton Street - Northbound and southbound left-turn lanes are proposed along Illinois Route 2 in conjunction with corner radii improvements to both the east and west legs of this intersection. The west leg will be shifted slightly to the south in order to align the intersection. Traffic signals are not warranted at this intersection.

- Montague Street - Left-turn channelization is proposed along Illinois Route 2 at this intersection. A northbound right turn lane is proposed along the south leg of Illinois Route 2 at this intersection. Because the west leg of Montague Street is not designated as a truck route, the northwest and southwest corners will be improved to accommodate a WB-15 (WB-50) design vehicle, instead of a WB-20 (WB-65). Using a WB-15 (WB-50) design vehicle will reduce the impact to the businesses located on these two corners. Access consolidation is currently proposed in the southwest quadrant. Traffic signals are included at this intersection.

- Loomis Street – 3.0-meter (11-foot) northbound and southbound left-turn lanes are proposed along Illinois Route 2 at this intersection. Minor corner radii improvements are proposed in the northeast, northwest and southwest quadrants so that existing right-of-way will not be impacted. The southeast radius will be improved to accommodate a WB-20 (WB-65) design vehicle. Traffic signals are not warranted at this intersection.

- Morgan Street - The proposed scope of work at this intersection includes providing left-turn channelization on Illinois Route 2. The north leg of the intersection will taper down from five to four lanes to the north at Kent Street. At the City of Rockford's request, the northwest and northeast corners will be improved slightly, maintaining the existing right of way in these two quadrants. The other two corners will be improved to accommodate a WB-20 (WB-65) design vehicle.

  The existing left-turn lanes on Morgan Street will be shifted south of the centerline to improve the southbound right-turn movement. This shift will eliminate parking on the south side of Morgan Street. Existing traffic signals at this intersection will be modernized.

- Cedar Street - The scope of work at this intersection includes radius improvements to all four corners. This will not require any additional right-of-way. Access will be consolidated in the northwest quadrant of the intersection. Existing traffic signals at this intersection will be modernized The northeast corner will be realigned with the southeast corner so that northbound traffic in the outside lane no longer has to shift in the middle of the intersection.

Structures

- It is recommended that the existing structure carrying Illinois Route 2 over Fullers Creek (SN: 101-0023) be removed and replaced with a 28m (92 ft.) three-span structure. The span length and numbers and locations of piers are being determined as part of the preparation of Type Size and Location (T S&L) drawings.

- Because of the historic nature and generally good condition of the structure, there are no recommendations for repairs at this time for the Illinois Route 2 over Kent Creek structure (SN: 101-6110). However, it is recommended that the concrete facing on the abutments and pier be repaired and sealed in the future. Further structural inspection should also be performed prior to the roadway construction.

Environmental Justice

This project will require the relocation of 17 single residential houses, 16 mobile homes and 8 commercial buildings. It is anticipated that, due to the project location, all of the residents to be relocated are low-income and/or minority, therefore the residential relocations will result in a disproportionately adverse impact to low-income and/or minority residents. The remaining residents within the project area and in the mobile home park adjacent to Clifton Avenue are not expected to experience any negative impacts beyond temporary changes in access due to construction. Increases in traffic noise levels are not expected as Illinois Route 2 is an existing 4-lane facility and the proposed modifications in horizontal and vertical alignments of the mainline should not result in increased traffic. Since the residential areas are currently bisected by Route 2, community cohesion impacts will be limited to those experienced through the removal of structures and familiar views. The homes along the Rock River (between Station 11+400 and Station 11+800) will all be taken, and therefore no isolation will result from the action.

Acquisition, relocation activities, and benefits will comply with provisions of the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended, and the Illinois Department of Transportation Land Acquisition Procedures Manual. Relocation resources are available to all who are relocated without discrimination. The area of residential removal along the Rock River is planned to be developed by the City as parkland.

Table 1*

City/Census Tract	% White/Minority		Med. Family Income	% Below Poverty Level**
Rockford (pop. 150,115)	72.8%	34.9%	$45,465	10.5%
Census Tract				
#21	51.2%	50.5%	$28,456	19.7%
#22	46.5%	60.1%	$39,366	16.3%
#25	17.4%	85.0%	$22,276	33.2%
#26	28.7%	60.9%	$12,629	53.4%
#27	30.2%	86.7%	$31,436	16.5%
#28	22.4%	89.1%	$30,080	30.3%

*Source: U.S. Census 2000. Note that percents may exceed a total of 100% as individuals may report more than one race.
**The 2000 Census Poverty Level for a family of four is $17,029. The Health and Human Services 2005 Poverty Guideline for a family of four is $19,350.

PR-_____/_____/

FAP Route 742 (Illinois Route 2)
Section 40
Winnebago County
Job No. P-92-136-94

SPECIAL REPORTS

A.	SECTION 4(f) EVALUATION/DETERMINATION Required for federally-funded projects which would use land from a publicly-owned park, recreation area, wildlife and waterfowl refuge, or any land from a historic site.	N/A
B.	SECTION 6(f) CONVERSION REQUESTS Required for projects which would acquire right-of-way from park or recreational lands which have Land and Water Conservation (LAWCON) funds involved.	N/A
C.	SECTION 106/STATE 707 REPORT Required for any project acquiring right-of-way or adversely affecting properties on the National Register of Historic Places or properties found eligible for registration.	N/A
D.	NOISE STUDY Required for federally-aided projects consisting of significant alignment changes.	N/A
E.	FLOOD PLAIN STUDY Required for federally-funded/regulated projects (particularly bridges) that are within the limits of a FEMA base flood plain.	Figure 9a
F.	WETLAND MITIGATION PLAN Required for any project with impact on a regulatory wetland.	N/A
G.	AIR QUALITY CONFORMITY Required for federally-funded projects on new alignment carrying a current ADT of over 16,000 or on state-only funded projects of over 25,000 current ADT.	Figure 9b
H.	BIOLOGICAL SURVEY SUMMARY NOT required unless Sign-Off is requested from Central Office.	N/A
I.	RECYCLING ANALYSIS	N/A

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FAP Route 742 (Illinois Route 2)
Section 40
Winnebago County
Job No. P-92-136-94

COORDINATION

A. BI-MONTHLY MEETING MINUTES/CE CONCURRENCE — Figure 10a

_____ Group I for information purposes
__X__ Group II projects require individual CE II Concurrence — Figure 10b

B. BIOLOGICAL RESOURCES CLEARANCE — Figure 10c
Required for all stream crossings, any project involving additional right of way, or projects involving ecologically-sensitive existing right of way.

C. IDNR/USF&W COORDINATION — N/A
Required for all projects needing a Biological Resource Clearance which cannot be signed off in-house.

D. CULTURAL CLEARANCE — Figure 10d
Required for all projects with additional right of way.

E. AGRICULTURAL COORDINATION — N/A
____ For site projects: more than 10 acres ROW
____ For linear projects: more than 3 acres/mile
____ Any project severing agricultural land

For Federally-aided projects meeting above criteria — N/A
U.S. Soil Conservation Service Coordination
(NOTE: W&RS jobs with contiguous right of way are exempt regardless of acreage.)

F. CLEARINGHOUSE (A-95) REVIEW
Required for ANY project involving right of way or permanent easement, substructure work below water line, 4(f), Individual 404 Permits, or a major change in traffic pattern.
Local — N/A
State — Figure 10e

G. ILLINOIS DIVISION OF AERONAUTICS — Figure 10f
Projects within 2 miles of public airports, 1 mile of private airports and 1/2 mile of restricted landing strips which have obstructions greater than 15 feet or area on new vertical or horizontal alignment.

H. HAZARDOUS WASTE (CERCLIS) CLEARANCE — Figure 10g
Required for ALL projects except simple resurfacing with no excavation and bridge superstructure improvement.

I. OTHER COORDINATION
Census Tracts Map — Figure 10h

PR-_____/_____/

FAP Route 742 (Illinois Route 2)
Section 40
Winnebago County
Job No. P-92-136-94

PERMITS

A. EROSION AND SEDIMENT CONTROL ANALYSIS FORM — Figure 11a

See form for applicability of NPDES Permit Requirements.

B. CORP OF ENGINEER 404 PERMIT (See Hydraulics Unit) — Figure 11b
Applicable for all in stream work, all structure replacements over streams, and wetland impacts. (See Environmental Unit for wetland information first.)

___ No waterway crossing on this project has a drainage area exceeding one square mile. Therefore, this project is exempt from permit requirements.

X The project meets the criteria of Nationwide Permit #14.

X The project meets the criteria of Nationwide Permit #33.

___ The Federally-Aided project meets the criteria of the Nationwide 404 Permit #23 for Categorical Exclusions and has been signed.

___ The project meets the criteria of an Individual Permit.

C. COAST GUARD PERMIT (See Hydraulics Unit) — N/A
Required for projects involving navigable waterways.

D. IEPA PERMIT (See Hydraulics Unit) — N/A
Required when an Individual 404 Permit or Nationwide Permit #33 or #23 processing is required.

E. OFFICE OF WATER RESOURCES PERMIT (See Hydraulics Unit) — N/A
Required for: a) Any wetland fill, b) In-stream work for urban streams with watershed greater than one square mile, c) In-stream work for rural streams with watershed greater than ten square miles. Not required for superstructure replacement.

PR-_____/_____

FAP Route 742 (IL 2)
Section 40
Winnebago County
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2. a. Plan & Profile
   b. Intersection Design Studies

3. Preliminary Cost Estimate

4. Public Involvement

5. Typical Sections - Existing and Proposed

6. Accident Analysis

7. Bridge Condition Reports - Fuller and Kent Creeks
   Type Size and Location Drawing– Fuller Creek

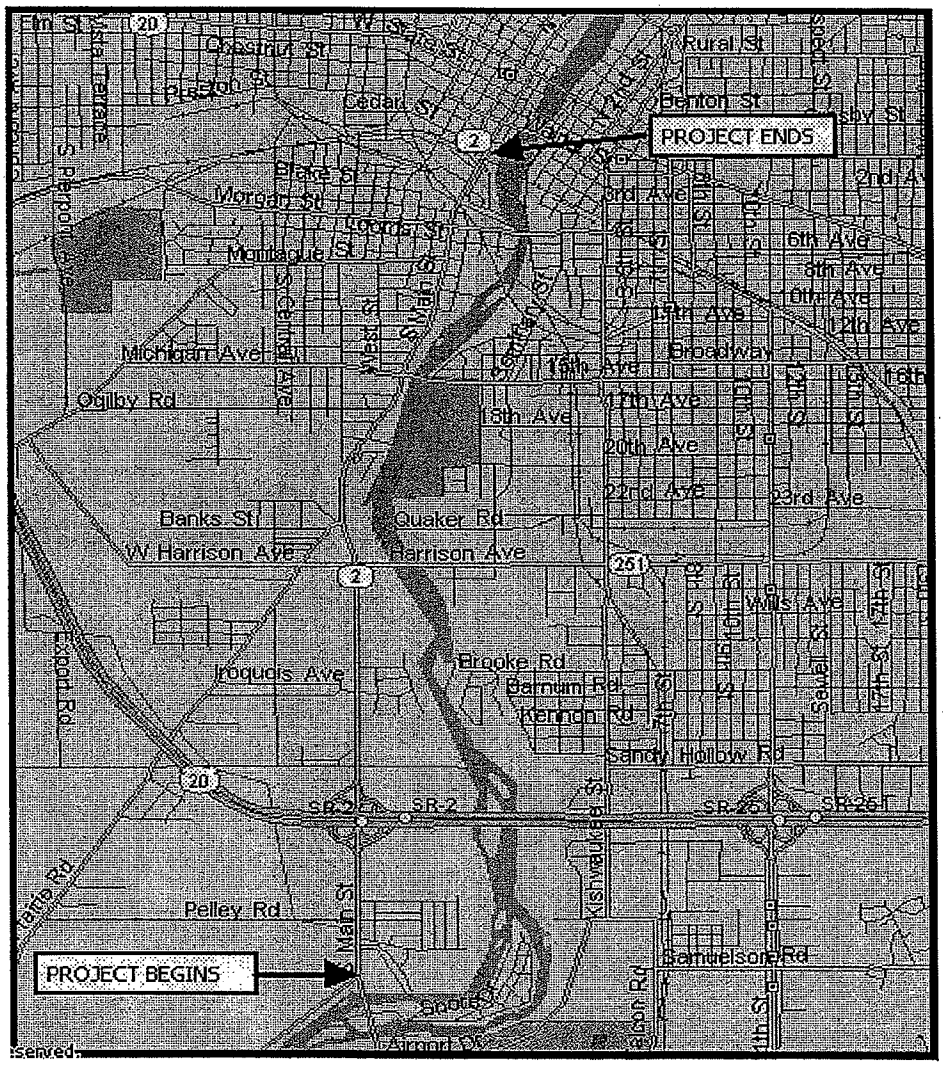
8. Traffic Management Analysis

9. a. Flood Plain Study and Flood Plain Encroachment
   b. Special Reports – Air Quality Conformity Analysis

10. Coordination

    a. Bi-Monthly Meeting Minutes and Design Exceptions
    b. Group II CE Concurrence
    c. Biological Resources Clearance
    d. Cultural Clearance
    e. Clearinghouse Review (A-95) State
    f. Illinois Division of Aeronautics
    g. Hazardous Waste
    h. Census Tracts Map

11. a. Erosion and Sediment Control
    b. Section 404 Permit



LOCATION MAP

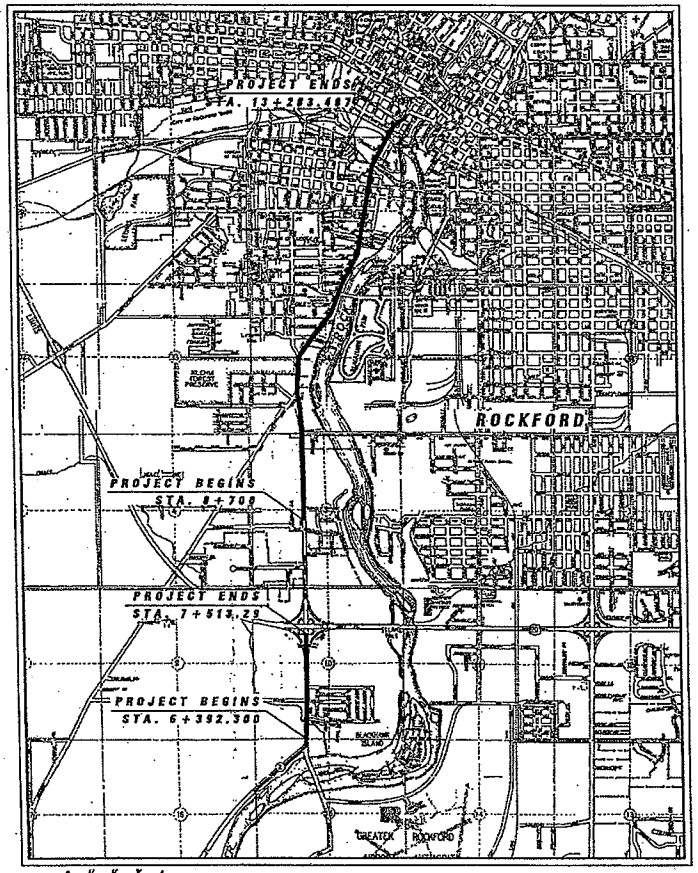
for

FA ROUTE 742 (IL 2)
SECTION 40
WINNEBAGO COUNTY
JOB NO. P-92-136-94
FROM S. BELTLINE RD TO CEDAR ST
CONTRACT 64515, 64820, & 64821

PROJECT LENGTH APPROX. 4.0 MILES

FIGURE 1

IL ROUTE 2
(BELTLINE ROAD TO CEDAR STREET)



LOCATION MAP

N

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PLAN AND PROFILE SHEETS

IL ROUTE 2

(BELTLINE ROAD TO CEDAR STREET)

SHEET 1 OF 31

RJN GROUP, INC.
CONSULTING ENGINEERS

FIGURE 2A
SHEET 1 OF 31